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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/005,066	12/03/2001	Julie Anna Symons	10015520	9441

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EXAMINER

TRAN, NGHI V

ART UNIT PAPER NUMBER

2151

DATE MAILED: 07/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/005,066	Applicant(s) SYMONS ET AL.	
	Examiner Nghi V. Tran	Art Unit 2151	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 05 July 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 13-22 and 24-38 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 13-22 and 24-38 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on July 05, 2006 has been entered.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 13-16, 18-22 and 25-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vairavan, U.S. Patent Application Publication No. 2002/0083344 (hereinafter Vairavan), in view of Wang et al., U.S. Patent No. 6,538,997 (hereinafter Wang).

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4. With respect to claims 22 and 13, Vairavan teaches a method of managing a network [see abstract and fig.1], said method comprising:

- accessing a database of a stored physical topology of said network to obtain authorized address at host ports of switches [paragraphs 0074-0084 i.e. a security policy database];
- configuring a switch in said network to forward a packet received at a first port [120, 125 and 130] if an address associated with said packet is authorized for said first port [paragraphs 0054-0060];
- comparing a set of learned addresses against set of expected addresses, said learned addresses comprising addresses associated with packets processed at a second port [115a-g], said expected addresses derived from an expected configuration of said network [paragraphs 0059-0060 and 0086-0101].

However, Vairavan does not explicitly show tracing a topology of said network to find a third port where an unexpected address entered said network, said third port coupled to a device having a media access control (MAC address) that is said unexpected address.

In a method of managing a network, Wang suggests or discloses tracing a topology of said network [i.e. tracing of the computer network, col.1, Ins.11-32 and col.5, ln.9 – col.6, ln.65] to find a third port where an unexpected address entered said network, said third port coupled to a device having a media access control (MAC address) [i.e. the determination of which port a particular MAC address is reachable.

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For example, Wang suggests if ports do not reachable, the frame is flooded over all outgoing non-blocked ports, col.6, Ins.50-65].

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Vairavan in view of Wang by tracing a topology of said network to find a third port where an unexpected address entered said network, said third port coupled to a device having a media access control (MAC address) that is said unexpected address because this feature is a consequence of the topologies being aligned [Wang, col.6, Ins.63-65]. It is for this reason that one of ordinary skill in the art at the time of the invention would have been motivated in order to gather specific diagnostic information relating to a particular path through the switched network [Wang, col.6, Ins.20-21].

5. With respect to claim 25, Vairavan further teaches said configuring the switch further comprises configuring the switch to drop said packet if said address is not authorized [paragraph 0132].

6. With respect to claims 18 and 26, Vairavan further teaches said configuring the switch comprises programming the switch in said network to recognize authorized address for said first port [paragraphs 0054-0060].

7. With respect to claim 27, Vairavan further teaches said configuring the switch further comprises configuring the switch to forward said packet to a host device [215 i.e.

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system processor] if said address is authorized for said first port, said first port coupled to said host device [paragraphs 0054-0060].

8. With respect to claim 28, Vairavan further teaches said method further comprising: determining changes in physical topology of said network [paragraphs 0060 and 0086-0088].

9. With respect to claim 29, Vairavan further teaches said determining changes in physical topology comprises comparing a physical description of said network with said stored physical topology of said network [paragraphs 0060 and 0086-0088].

10. With respect to claims 30, Vairavan further teaches said address is a media access control (MAC) address and wherein said network comprises a virtually-wired switching fabric [fig.2].

11. With respect to claims 14-15, Vairavan further teaches said network is a virtually-wired switching network [fig.1] and said first port couples switches in said network and said second port is couple to a host device [paragraphs 0046-0054].

12. With respect to claim 16, Vairavan further teaches said method further comprises: taking corrective action at said second port, wherein said second port is coupled to a host device [paragraphs 0069-0071].

13. With respect to claim 19, Vairavan further teaches of said method is repeated for each interconnect port in said network, wherein said network comprises a plurality of switches [paragraph 0069 and fig.1].

14. With respect to claim 20, Vairavan further teaches said method further comprises: determining changes in physical topology of said network [paragraphs 0059-0060 and 0086].

15. With respect to claim 21, Vairavan further teaches of said method comprises comparing a physical description of said network with a stored physical description of said network [paragraphs 0073-0088].

16. Claims 17 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vairavan in view of Wang as applied to claims 13 and 22 above, and further in view of Holloway et al., U.S. Patent No. 5,805,801 (hereinafter Holloway).

17. With respect to claims 17 and 24, Vairavan further teaches the method further comprising: said network is a virtually-wired switching fabric [fig.2] and said third port is at the edge of said fabric [paragraphs 0068-0070].

However, Vairavan does not explicitly show disabling said third port.

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In a method of managing a network, Holloway discloses disabling a port [col.3, Ins.3-25].

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Vairavan in view of Wang, and further in view of Holloway by disabling the port because this feature not only provides for detection of security intrusions, but also provides the proactive actions needed to stop the proliferation of security intrusions over the domain [Holloway, col.2, Ins.41-45]. It is for this reason that one of ordinary skill in the art at the time of the invention would have been motivated in order to filter on their respective ports against the intruding unauthorized address [Holloway, see abstract].

18. Claims 31-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vairavan in view of Wang, and further in view of Holloway.

19. With respect to claim 31, Vairavan teaches a network comprising:

- a plurality switches [paragraphs 0047-0048];
- said switches interconnected and configured to control communication between a plurality of devices coupled to said network [fig.1];
- a database having stored therein a stored physical topology of said network and authorized addresses associated with packets processed at ports of said switches, wherein said authorized addresses are based on said stored physical topology [paragraphs 0074-0084 i.e. a security policy database];

However, Vairavan does not explicitly show a configuration agent that is able to program said switches based on said authorized address to detect a packet having an unauthorized address; and a management agent that is able to: compare addresses learned by said switches against said authorized addresses to determine an unauthorized address.

In a method of managing a network, Wang suggests or discloses tracing a topology of said network [i.e. tracing of the computer network, col.1, lns.11-32 and col.5, ln.9 – col.6, ln.65] to find a third port where an unexpected address entered said network, said third port coupled to a device having a media access control (MAC address) [i.e. the determination of which port a particular MAC address is reachable. For example, Wang suggests if ports do not reachable, the frame is flooded over all outgoing non-blocked ports, col.6, lns.50-65].

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Vairavan in view of Wang by tracing a topology of said network to find a third port where an unexpected address entered said network, said third port coupled to a device having a media access control (MAC address) that is said unexpected address because this feature is a consequence of the topologies being aligned [Wang, col.6, lns.63-65]. It is for this reason that one of ordinary skill in the art at the time of the invention would have been motivated in order to gather specific diagnostic information relating to a particular path through the switched network [Wang, col.6, lns.20-21].

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Further, Holloway discloses a configuration agent that is able to program said switches based on said authorized address to detect a packet having an unauthorized address [col.3, Ins.30-43 and col.4, ln.46 - col.5, ln.12]; and a management agent that is able to: compare addresses learned by said switches against said authorized addresses to determine an unauthorized address [col.7, Ins.7-68 and col.3, Ins.37-39], in a communication system.

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Vairavan in view of Wang, and further in view of Holloway by adding a configuration agent and management agent because this feature this feature not only provides for detection of security intrusions, but also provides the proactive actions needed to stop the proliferation of security intrusions over the domain [Holloway, col.2, Ins.41-45]. It is for this reason that one of ordinary skill in the art at the time of the invention would have been motivated in order to send an alert frame to the functional address [Holloway, col.8, Ins.18-19].

20. With respect to claim 32, Vairavan further teaches said switches are further configured to forward said packet if said address is authorized [paragraphs 0054-0060].

21. With respect to claim 33, Vairavan further teaches said switches are further configured to drop said packet if said address is not authorized [paragraph 0132].

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22. With respect to claim 34, Vairavan further teaches there is a one-to-one mapping between ports of said switches [paragraphs 0047-0049].

23. With respect to claim 35, Vairavan further teaches said addresses are medium control access (MAC) addresses [fig.2].

24. With respect to claim 36, Vairavan further teaches said network comprises a virtually-wired switching fabric [fig.2].

25. With respect to claim 37, Vairavan further teaches said management agent is further able to determine changes in said physical topology of said network and to update said stored physical topology and authorized addresses in said database based on said changes [0054-0060].

26. With respect to claim 38, Vairavan further teaches said configuration agent is further able to re-program said switches based on said updates to said authorized addresses [paragraphs 0054-0060].

### ***Response to Arguments***

27. Applicant's arguments with respect to claims 13-22 and 24-38 have been considered but are moot in view of the new ground(s) of rejection.

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***Conclusion***

28. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nghi V. Tran whose telephone number is (571) 272-4067. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Zarni Maung can be reached on (571) 272-3939. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Nghi V Tran  
Patent Examiner  
Art Unit 2151

NT

*Khanh Dinh*  
*Primary Examiner*